

# Notes on *Dansiea* Byrnes and *Macropteranthes* F. Muell. (Combretaceae)

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## Summary

Forster, Paul I. (1994). Notes on *Dansiea* Byrnes and *Macropteranthes* F. Muell. (Combretaceae). *Austrobaileya* 4(2): 149–153. An amplified description is provided of *Dansiea grandiflora* Pedley from Cape York Peninsula, Queensland, together with illustrations and notes on its distribution, habitat and conservation status. *Macropteranthes leiocaulis* P.I. Forst. from central and southern Queensland is newly described and illustrations together with notes on distribution, habitat and conservation status are provided. A key is provided to the species of *Macropteranthes*.

Keywords: *Dansiea grandiflora*; *Macropteranthes leiocaulis*.

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## Introduction

The family Combretaceae was monographed for Australia by Byrnes (1977). Subsequent collections resulted in the additional genera *Dansiea* Byrnes (Byrnes 1981) and *Combretum* Loebl. (Clarkson & Hyland 1986) being recognised for Australia. Pedley (1990), in a 'Flora of Australia' treatment, recognised five genera and 33 species for Australia including a second species of *Dansiea*, namely *D. grandiflora* Pedley.

### *Dansiea grandiflora* Pedley

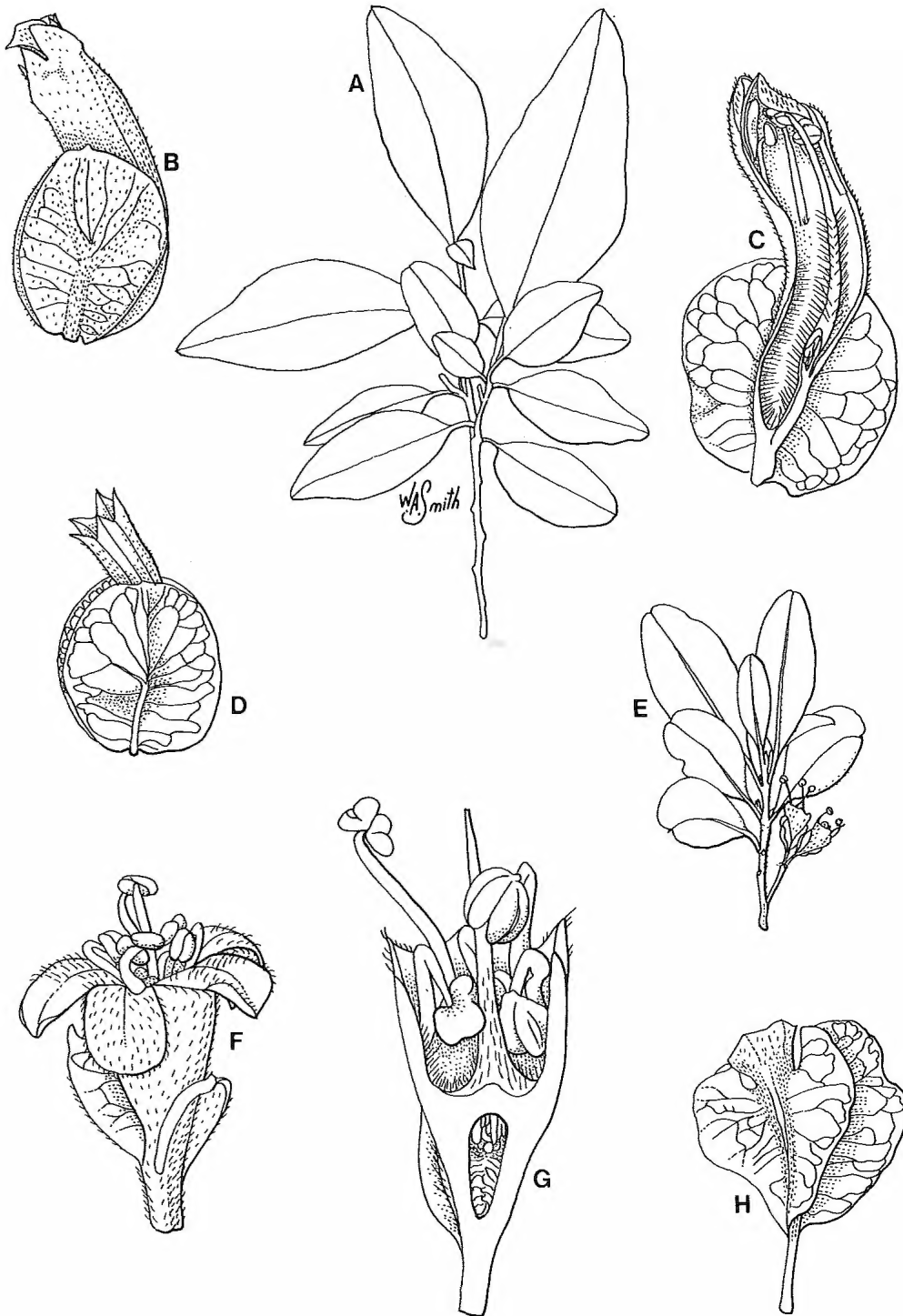
As noted by Pedley (1990), the type of *D. grandiflora* is not in good condition and lacks stamens and petals. No illustrations were provided at the time due to the late inclusion of the new species in the 'Flora of Australia' account. I have subsequently revisited the type locality and collected further material of this species, thus enabling an amplified description to be made.

***Dansiea grandiflora* Pedley**, Fl. Aust. 18: 326 (1990). **Type:** Queensland. COOK DISTRICT: Ridge 1 km E of Kennedy Hill, 12°28'S, 143°16'E, 21 June 1989, P.I. Forster 5414 & M.C. Tucker (holo: BRI; iso: CANB, K).

Tree to 10 m high; bark whitish and nondescript. Branches held erect. Leaves petiolate, discolorous, initially with adpressed trichomes, later glabrescent apart from midrib below; petiole 2–10 mm long, c. 1 mm wide; lamina oblong, elliptic or obovate, 13–60 mm long, 8–30 mm wide; tip acute to obtuse, occasionally minutely apiculate; base cuneate. Flowers zygomorphic, 25–30 mm long, subsessile on axillary peduncles 5–10 mm long. Calyx 18–20 mm long, with dense adpressed trichomes, with  $\pm$  orbicular bracteoles 15–16 mm diameter and adnate to lower half. Petals broadly ovate, c. 6 mm long and 6 mm wide, glabrous apart from a ciliate margin of trichomes up to 0.3 mm long. Stamens inserted in calyx tube in 2 series with small appendage at base of filaments in inner whorl; outer filaments 5–6 mm long, inner filaments 6–7 mm long; anthers oblong, 1.8–2 mm long, c. 1.2 mm wide. Style 8–10 mm long; ovary 10–11 mm long, with dense trichomes. Fruit: calyx tube 18–20 mm long, bracteoles 18–25 mm diameter. **Fig. 1A–E.**

**Specimens examined:** Queensland. COOK DISTRICT: Kennedy Hill Gorge, 'Bromley', 12°28'S, 143°15'E, Jul 1991, Forster 8889 (BRI, QRS).

**Distribution and habitat:** Known only from the Kennedy Hill area on Bromley Station, Cape York Peninsula. Plants grow in notophyll vineforest over granite substrate, both along semi-permanent watercourses and on adjacent ridges near to the sea.



**Fig. 1.** A–D. *Dansiea grandiflora*. A. habit of foliage  $\times 1$ . B. side view of flower  $\times 2$ . C. cross-section of flower  $\times 2$ . D. fruit  $\times 2$ . E–H. *Macropteranthes leiocaulis*. E. habit of foliage  $\times 1$ . F. side view of flower  $\times 6$ . G. cross-section of flower  $\times 8$ . H. fruit  $\times 2$ . A–D, Forster 8889; E–G, Forster 9417 & Bean; H, Forster 7969 & McDonald. Del. W. Smith.

**Notes:** *D. grandiflora* is notable for its large flowers compared with those of *D. elliptica* Byrnes, the only other species in the genus.

**Conservation status:** Not endangered or vulnerable. An appropriate conservation coding is 2R using the criteria of Briggs and Leigh (1988).

***Macropteranthes leiocaulis* sp. nov.**

Continuing botanical exploration of the rainforest, vineforest and vinethicket communities of eastern Queensland has revealed the existence of a previously undescribed species of *Macropteranthes*.

***Macropteranthes leiocaulis* P.I. Forst., sp. nov.** affinis *M. fitzalanii* F. Muell., a qua trunco maturo laevi roseo usque albidiviridi, pedicello floris 1.5–2 mm longo, calyce in flore bracteolas superanti, calycis tubo trichomatibus densis adpressis.  
**Typus:** Queensland. NORTH KENNEDY DISTRICT: Mingela Bluff, 19°53'S, 146°45'E, 20 January 1992, *P.I. Forster* 9417 & *A.R. Bean* (holo: BRI [2 sheets + spirit]; iso: DNA, K, L, MEL, QRS).

[*Macropteranthes fitzalanii* auct. non F. Muell.; Forster *et al.* 1991]

Shrub or tree up to 25 m high; bark smooth, pink to green-white or somewhat scaly in blotches when being shed. Branches erect; branchlets initially with adpressed trichomes, later glabrescent; foliage seasonally deciduous. Leaves opposite, not crowded, petiolate, initially with adpressed trichomes, later glabrescent, discolorous; petiole 1–8 mm long, c. 1 mm diameter; lamina broadly elliptic to orbicular, 9–80 mm long, 4–23 mm wide, upper surface glossy green, lower surface pale glossy green; tip obtuse or rarely minutely apiculate; base cuneate or weakly attenuate. Inflorescence 2-flowered; peduncles 4–14 mm long, c. 0.5 mm diameter, with sparse to dense, adpressed trichomes; bracts not seen. Pedicels 1.8–2 mm long, glabrous or with scattered trichomes. Calyx with sparse to dense, adpressed trichomes; tube 4–7 mm long and 3–5 mm diameter; lobes broadly triangular, 0.8–2 mm long, 1.2–3 mm wide; bracteoles obovate, shorter than calyx,

3.5–11 mm long, glabrous or with scattered trichomes. Petals broadly ovate to obovate, 2.5–7 mm long, 2–5 mm wide, externally glabrous, internally with dense trichomes. Staminal filaments 3–8 mm long, 0.3–0.5 mm diameter, thinner distally; anthers oblong, 1–1.2 mm long, 1–1.2 mm wide. Disc sparsely villous. Style 4.5–7 mm long, with scattered trichomes. Fruit: calyx 15–17 mm long; bracteoles obovate and as long as the calyx, 12–15 mm wide, glabrous, straw-coloured. **Fig. 1E–H.**

**Specimens examined:** Queensland. NORTH KENNEDY DISTRICT: The Bluff, 10 km E of Mingela, 19°54'S, 146°43'E, Sep 1989, *Cumming* 9347 (BRI); ditto, Jul 1990, *Cumming* 10331A & B (BRI, L), 10350 (BRI). LEICHHARDT DISTRICT: Dipperu N.P. 72, c. 24 km S of Nebo, 21°55'S, 148°4'E, Oct 1971, *McDonald* 238 (BRI); ditto, Dec 1993, *Champion* 911 *et al.* (BRI, MEL, QRS); Crows Apple Scrub, Rookwood, 23°11'S, 149°43'E, Apr 1991, *Forster* 7969 & *McDonald* (AD, BRI, CANB, CBG, DNA, K, L, MEL, MO, PERTH, QRS). PORT CURTIS DISTRICT: Mt Larcom Range, 23°45'S, 151°04'E, Jan 1988, *Gibson* 1099 (BRI); Mt Larcom Range, 6 km NNW of Targinie, 23°46'S, 151°04'E, Apr 1990, *Gibson* TOI65 (BRI); Mt Coulston, 9 km NNW of Bororen, 24°11'S, 151°26'E, May 1991, *Gibson* TOI66 (BRI); Mt Coulston, 8 km NW of Bororen, 24°11'S, 151°26'E, Dec 1991, *Gibson* TOI1156 (BRI); Scientific Area 54, S.F. 121, 24°27'S, 151°11'E, Sep 1989, *Forster* 5700 & *Bean* (BRI); ditto, Dec 1993, *Forster* 14513 *et al.* (BRI, K, L, MEL, QRS); Lower reaches of Koolkoorum Creek, 12 km W of Ubobo, 24°25'S, 151°12'E, Sep 1989, *Forster* 5688 & *Bean* (BRI); ditto, Dec 1993, *Forster* 14511 *et al.* (BRI). BURNETT DISTRICT: S.F. 172, Portion 90 [now E.P.], 25°24'S, 151°22'E, Aug 1988, *Forster* 4686 (BRI).

**Distribution and habitat:** *M. leiocaulis* occurs in the North Kennedy, Leichhardt, Port Curtis and Burnett districts with a known northern limit at Mingela Bluff and a southern limit at the Binjour Plateau near Mundubbera. Plants grow in deciduous vinethickets, semi-evergreen vinethickets and araucarian microphyll vineforests on red eucrozems or sandstone talus.

**Notes:** This species has previously been confused with *M. fitzalanii*. *M. fitzalanii* has a more coastal distribution and occurs in wetter vineforests, exemplified by those at Conway Range north-east of Proserpine. The foliage of both species is similar; however, they are radically dissimilar in both trunk morphology (smooth, pink to whitish-green or somewhat scaly in patches when being shed, versus white, persistent scaly in long strips) and floral dimensions (pedicels 1.5–2 mm long; calyx

tube with sparse to dense adpressed trichomes, bracteoles shorter than calyx in flower; versus pedicels c. 4 mm long; calyx tube glabrous, bracteoles same length as calyx in flower).

There have been few fertile collections of *M. leiocaulis*, and the previous reviewers of Combretaceae (i.e. Byrnes 1977, Pedley 1990) have not seen the species in the field. Hence, it is understandable why this plant has been overlooked until now. Some sterile collections of *Macropteranthes* from several localities in the Port Curtis district (e.g. Marmor, Raglan)

are difficult to unequivocally place in either species, although when their habitat is considered, it is likely that they also represent *M. leiocaulis*. If this is the case, then *M. fitzalanii* is restricted to the North Kennedy district.

Leafless individuals of *M. leiocaulis* are superficially similar to those of *Choricarpia subargentea* (C.T. White) L.A.S. Johnson (Myrtaceae) and *Flindersia australis* R. Br. (Rutaceae) and could be possibly confused with these species, although only the latter appears sympatric (Forster *et al.*, 1991).

### Key to species of *Macropteranthes*

1. Leaves to 12 mm long, sessile or almost so, crowded on small branches ..... 2  
    Leaves more than 12 mm long, petiolate, evenly spaced on all stems ..... 3
2. Bracteoles of fruit produced beyond the calyx ..... ***M. kekwickii*** F. Muell. ex Benth.  
    Bracteoles of fruit much shorter than the calyx .....  
    ..... ***M. montana*** (F. Muell.) F. Muell. ex Benth.
3. Mature leaves pubescent at least on lower side ..... ***M. leichhardtii*** F. Muell. ex Benth.  
    Mature leaves glabrous on both sides ..... 4
4. Trunks of adult trees smooth, pink to whitish-green or scaly in patches  
    when being shed; flower pedicels 1.5–2 mm long; calyx tube with dense  
    adpressed trichomes, bracteoles shorter than calyx ..... ***M. leiocaulis*** P.I. Forst.  
    Trunks of adult trees with persistent white flaky bark in long strips, flower  
    pedicels c. 4 mm long; calyx tube glabrous, bracteoles same length as  
    calyx ..... ***M. fitzalanii*** F. Muell.

**Conservation status:** *M. leiocaulis* is infrequently collected and appears to have a disjunct distribution within its known range. Many vine thickets continue to be under threat from land clearing and it is probable that many populations of this plant have been lost as a result. Three known populations of this plant are in National or Environmental Parks or State Forest Scientific Area; however, the other populations have no conservation security at this stage. A suggested conservation coding is 3VC, using the criteria of Briggs and Leigh (1988).

**Phenology:** Flowers December to January; fruits January to February.

**Etymology:** The specific epithet is derived from Greek and refers to the smooth (*leios*) trunk (*caulis*) of this species.

### Acknowledgements

W. Smith (BRI) provided the illustrations. This work benefitted from either field assistance, special collections, or observations by A.R. Bean, I.G. Champion, R. Fensham, W.J. McDonald and M.C. Tucker. The diagnosis was translated into Latin by L.A. Craven (CANB).

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